

ORNITHOLOGICAL LITERATURE

FORM AND FUNCTION IN BIRDS, VOL. 2. By A. S. King and J. McLelland (eds.). Academic Press, London (U.S. edition published by Academic Press Inc., New York, New York), 1981:xi + 496 pp., numerous black-and-white photos and line drawings. \$97.00.—This is the second in a projected three-volume series on the functional anatomy of birds. As in volume 1, which was reviewed earlier, the emphasis is on thorough descriptive anatomy as the basis for functional analysis at a non-biochemical level. There is a strong coverage of reproduction in this volume, with chapters on the male genital organs (P. E. Lake) and on the cloaca and phallus (A. S. King). Other chapters cover the endocrine glands (R. D. Hodges), cardiovascular system (N. H. West, B. Lowell Langille, and D. R. Jones), lymphatic system (M. E. Rose), and cranial nerves (A. Bubiń-Waluszewska). These are mostly lengthy chapters giving much more anatomical detail than the coverage provided in "Avian Biology." In most cases there is a strongly comparative aspect with the conditions in various kinds of birds as well as reptiles being considered. Nevertheless, the limitations of the primary literature often make it impossible to avoid a strong emphasis on a few domestic species. The final chapter is a concise account of the functional anatomy of the jaw apparatus by P. Bühler. It is quite short (30 pp.) by the standards of this series, giving a descriptive account of the morphology of the jaw apparatus followed by an analysis of its kinetics. The discussion is based heavily on Bühler's own work on caprimulgids, but with numerous references to other studies. Despite this, the account is general rather than comparative, and does not review the diversity of avian jaw mechanisms. A fuller appreciation of the avian feeding mechanism may be obtained by reading Bühler's chapter in conjunction with the section on the oral cavity and pharynx in J. McLelland's chapter on the digestive system in volume 1 of this series, which includes discussions of the tongue, oral sacs, salivary glands, taste buds, bill, and deglutition.

This book continues the high level of scholarship established in volume 1, but unfortunately the price will again put it beyond the reach of most of those who would benefit from owning their own copy.—ROBERT J. RAIKOW.

BEHAVIORAL MECHANISMS IN ECOLOGY. By Douglass H. Morse. Harvard University Press, Cambridge, Massachusetts, 1980:383 pp., 99 numbered text figs., 3 tables. \$25.00.—Hitherto, there has never been an adequate text on behavioral ecology, but Douglass Morse's book goes a long way towards filling this gap. Although this book does not deal only with birds, well over half of the studies described concern birds. This does not merely reflect the author's bias, but rather the suitability of birds for field studies of behavior.

The book opens with three chapters on foraging behavior, and provides a useful and original review of this best-studied aspect of behavioral ecology. Other topics treated include habitat selection, predator avoidance, thermoregulatory behavior, reproduction, competition for mates, territoriality, spacing patterns, competition between species and social groups. Most chapters conclude with a useful 'synthesis' section, and the final chapter attempts to look ahead to future developments. The literature coverage is broad and cosmopolitan and I found the treatment well-balanced and fairly easy to read. There are, however, one or two surprising omissions. Brood parasitism is not discussed and coevolution in general gets little attention.

The layout of the book is clear and the figures adequate, though unimaginative. (Maybe imagination is too costly, for the price of the book is quite reasonable!) The book contains few errors and stresses empirical evidence, rather than fashionable theorizing, although theoretical issues are considered extensively. Most examples are given in limited detail, but